

What is claimed is:

1. A register adjusting mechanism for a split plate cylinder provided in a printing unit of a rotary press, said printing unit including a blanket cylinder disposed in contact with said split plate cylinder, said split plate cylinder comprising a drive-side plate cylinder and an operation-side plate cylinder each supported in an axially movable and circumferentially rotatable manner, said register adjusting mechanism comprising:

first and second axial register adjustment means operable to axially move said operation-side plate cylinder and said drive-side plate cylinder, respectively, so as to adjust an axial register thereof independently; and

first and second circumferential register adjustment means operable to circumferentially rotate said drive-side plate cylinder and said operation-side plate cylinder, respectively, so as to adjust a circumferential register thereof independently,

wherein:

said first axial register adjustment means for said operation-side plate cylinder and said second axial register adjustment means for said drive-side plate cylinder are disposed adjacent and connected to a journal of said operation-side plate cylinder and a journal of said drive-side plate cylinder, respectively; and

at least one of said first and second circumferential register adjustment means for said drive-side plate cylinder and said operation-side plate cylinder is disposed adjacent and connected to a journal of said blanket cylinder.

2. The register adjusting mechanism as defined in claim 1, wherein said drive-side plate cylinder of said split plate cylinder has a core portion fitted into a hollow cylinder portion of said operation-side plate cylinder, and an operation-side journal portion inserted into an operation-side journal portion of said operation-side plate cylinder to extend outside said operation-side journal portion of said operation-side plate cylinder, wherein:

said first axial register adjustment means for said operation-side plate cylinder is disposed adjacent and connected to the operation-side journal portion of said operation-side plate cylinder;

said second axial register adjustment means for said drive-side plate cylinder is disposed adjacent and connected to the operation-side journal portion of said drive-side plate cylinder;

said first circumferential register adjustment means for said drive-side plate cylinder is disposed adjacent and connected to a drive-side journal portion of said drive-side plate cylinder;
and

said second circumferential register adjustment means for said operation-side plate cylinder is disposed adjacent and connected to an operation-side journal portion of said blanket cylinder.

3. The register adjusting mechanism as defined in claim 1, wherein said drive-side plate cylinder of said split plate cylinder has a core portion fitted into a hollow cylinder portion of said operation-side plate cylinder, wherein:

said first axial register adjustment means for said operation-side plate cylinder is disposed adjacent and connected to an operation-side journal portion of said operation-side plate cylinder;

said second axial register adjustment means for said drive-side plate cylinder is disposed adjacent and connected to a drive-side journal portion of said drive-side plate cylinder;

said first circumferential register adjustment means for said drive-side plate cylinder is disposed adjacent and connected to a drive-side journal portion of said drive-side plate cylinder;
and

said second circumferential register adjustment means for said operation-side plate cylinder is disposed adjacent and connected to an operation-side journal portion of said blanket cylinder.

4. The register adjusting mechanism as defined in either one of claims 1 to 3, wherein:

said at least one of said first and second circumferential register adjustment means which is connected to the journal of said blanket cylinder includes a gear member which has an outer peripheral surface provided with a spur gear, and an inner peripheral surface provided with an internal helical gear, wherein:

said spur gear of said gear member is engaged with a spur gear provided in either one of the journals of said drive-side plate cylinder and said operation-side plate cylinder; and

said internal helical gear of said gear member is engaged with an external helical gear

provided in the journal of said blanket cylinder.